

NADINE HECK

Ocean Sciences, University of California, Santa Cruz
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EDUCATION

- 2011 Ph.D. Geography, University of Leeds
Evaluating management effectiveness: Indicators for Marine Protected Areas in British Columbia
Supervisors: Adrian McDonald, Steve Carver, Philip Dearden (University of Victoria, BC)
- 2005 M.S. Geography, University of Exeter (1st class)
- 1999-2003 B.S. studies Geography, Geology & Biology (minors), University of Freiburg

ACADEMIC POSITIONS

- 2017 Assistant Project Scientist, University of California, Santa Cruz, Ocean Sciences
- 2014-2016 Postdoctoral Research Associate, University of California, Santa Cruz, Institute of Marine Sciences
- 2013-2014 Visiting Research Scholar, University of Florida/IFAS, Wildlife Ecology & Conservation
- 2011-2014 Postdoctoral Research Associate, Cornell University, Department of Natural Resources
- 2011 Research Fellow, University of Leeds, School of Geography
- 2009-2010 Research Analyst, University of Leeds, Canadian Studies
- 2002-2003 Research Assistant, University of Freiburg, School of Geography

GRANTS

- 2017-2019 NOAA Sea Grant, *Impediments and Opportunities for Coordinating Use of California's Coastal Ocean*, Co-Investigator, PI: Carrie Pomeroy,Carolynn Culver, UC San Diego, \$98,470
- 2017-2018 International Climate Initiative (IKI), *Ecosystems, Risk, and Climate Adaptation*, Co-Investigator, PI: Michael Beck, UC Santa Cruz, \$625,000
- 2014-2017 NSF, *Coastal SEES*, Co-Investigator, PI: Adina Paytan, UC Santa Cruz, \$531,67
- 2014 USFWS, *Setting Conservation Targets for the Peninsular Florida Landscape Conservation Cooperative*, Co-Investigator, PI: James Watling, University of Florida/IFAS, \$43,200
- 2012-2014 Great Lakes Fishery Commission, *Pathogens and Invasive Species in the Great Lakes: Understanding Managers and Stakeholders' Responses*, Co-Investigator, PIs: Bruce Lauber, Richard Stedman, Cornell University, \$188,000
- 2011-2013 Great Lakes Fishery Commission, *Human Dimension Research Needs for Great Lakes Fishery Management*, Co-Investigator, PIs: Dan Decker, Richard Stedman, Cornell University, \$200,000

AWARDS AND SCHOLARSHIPS

- 2014 NSF, Transdisciplinary Summer Academy on Marine Resource Sustainability
- 2010 Canadian Studies Centre University of Leeds, Postgraduate Award \$1,000
- 2009 Ocean Management Research Network, Student Travel Award, \$1,000
- 2008 Canadian Studies Centre, Postgraduate Award, \$1,000
- 2008 Social Science and Humanities Research Council (SSHRC) - Field Research Grant, \$1,700
- 2008 British Association for Canadian Studies, Travel Award, \$1,000
- 2007 Canadian Studies Centre Travel Award, \$1,000
- 2006 University of Leeds, University Research Scholarship, \$70,000
- 2003-2004 European Union, Erasmus Scholarship, University of Reading & Stockholm University

PUBLICATIONS

- Heck, N.,** Paytan, A., Potts, D.C., Haddad, B., and Lykkebo Peterson, K. (submitted) Management preferences and attitudes regarding environmental impacts from seawater desalination: perspectives from a small coastal community, *Ocean and Coastal Management*
- Heck, N.,** Paytan, A., Potts, D.C., Haddad, B., and Lykkebo Peterson, K. (2017) Management priorities for seawater desalination plants in a marine protected area: a multi-criteria analysis, *Marine Policy* 88: 64-71.
- Heck, N.,** Paytan, A., Potts, D.C., and Haddad, B. (2016) Predictors of local support for a seawater desalination plant in a small coastal community, *Environmental Science and Policy*. 66: 101-111
- Heck, N.,** Lauber, T.B., and Stedman, R. C. (2016) The spread of pathogens and aquatic invasive species in the Great Lakes basin: An application of the Drivers-Pressures-State-Impacts- Responses model, *Ocean and Coastal Management*, 132: 38-45.
- Heck, N.,** Stedman, R., and Gaden, M. (2016) Indicators to evaluate the social dimensions of the recreational fishery in the Great Lakes. *North American Journal of Fisheries Management* 36 (3): 477-484.
- Heck, N.,** Paytan, A., Potts, DC, Haddad, B. (2016) Coastal residents' literacy about seawater desalination and its impacts on marine ecosystems in California, *Marine Policy* 68: 178-186.
- Heck, N.,** Stedman, R., and Gaden, M. (2016) Human dimensions' information needs of fishery managers in the Laurentian Great Lakes. *Journal of Great Lakes Research* 42(2): 319-327.
- Heck N.,** Stedman, R., and Gaden, M. (2015) The integration of social science information into Great Lakes fishery management: Opportunities and challenges. *Fisheries Research* 167: 30-37.
- Heck, N.,** Stedman, R., and Gaden, M. (2014) The Integration of Human Dimensions into Great Lakes Fishery Management. *HDRU Publication 14-2*. Department of Natural Resources, N.Y.S. College of Agriculture and Life Science, Cornell University, Ithaca, NY.
- Heck, N.,** and Lauber, B. (2013) Pathogens and Invasive Species in the Great Lakes: Understanding Manager Responses. *HDRU Publication 13-9*. Dep. of Natural Resources, N.Y.S. College of Agriculture and Life Science, Cornell University, Ithaca, NY.
- Heck, N.** and Dearden P. (2012) Local Expectations for Future Marine Protected Area Performance: A Case Study of the Proposed National Marine Conservation Area in the Southern Strait of Georgia, Canada,

Coastal Management 40: 577-593.

- Heck, N.** and Dearden P., and McDonald, A. (2012) Stakeholder evaluation priorities for demonstrating marine protected effectiveness at Pacific Rim National Park Reserve, Canada, *Coastal Management* 40 (1): 55-72.
- Heck, N.** and Dearden P., and McDonald, A. (2012) Insights into marine conservation efforts in temperate regions: marine protected areas on Canada's West Coast, *Ocean and Coastal Management* 57 (1): 10-20.
- Heck, N.**, Dearden, P., and McDonald, A. (2011) Stakeholders' expectations towards a proposed marine protected area: a multi- criteria analysis of preferred performance criteria, *Ocean and Coastal Management* 54 (9): 687-695.
- Heck, N.**, Dearden, P., McDonald, A., and Carver, S. (2011) Stakeholder opinions on the assessment of MPA effectiveness and their interests to participate at Pacific Rim National Park Reserve, Canada, *Environmental Management* 47 (4): 603-616.
- Heck, N.**, Dearden, P., McDonald, A., and Carver, S. (2011) Developing MPA performance indicators with local stakeholders' input in the Pacific Rim National Park Reserve, Canada, *Biodiversity and Conservation* 20 (4): 895- 911.
- Gössling, S., Kunkel, T., Schumacher, K., **Heck, N.**, Birkemeyer, J., Froese, J., Naber, N., and Schliermann, E. (2004) A target group-specific approach to "green" power retailing: students as consumers of renewable energy, *Renewable and Sustainable Energy Reviews* 9: 69- 83.
- Gössling, S., Berger, R., **Heck, N.**, and Morell, M. (2004) Tourism and street children in Antananarivo, Madagascar, *Tourism and Hospitality Research* 5 (2): 131- 50.

REPORTS AND BOOK CHAPTERS

- Haddad, B., **Heck, N.**, Paytan, A., Potts, D. (2017) Social issues and public acceptance of seawater desalination plants, *Sustainable Desalination Handbook*, Elsevier.
- Heck, N.**, Stedman, R., and Gaden, M. (2014) *Human Dimension Research Needs for Great Lakes Fishery Management, A Guide for Potential Researchers*, Great Lakes Fishery Commission, Ann Arbor, MI.
- Heck, N.** (2009) *Academic Relations with Canadian Institutions, Canadian Related Research Activities and Community Outreach at the University of Leeds*. Report for the Centre of Canadian Studies, University of Leeds, October 2009.
- Heck, N.** (2008) Marine Protected Areas in Canada: How can the research community help?, *OMRN MPA Working Group Report*.

TEACHING

- 2014 Communicating Ocean Sciences, UC Santa Cruz, Visiting Instructor
- 2014 Current Perspectives of Marine Conservation, Cornell University, Instructor
- 2013 Society and Natural Resources, Cornell University, Guest Lecturer
- 2008-2010 Analytical Skills in Physical Geography, University of Leeds, Teaching Assistant
- 2006 Climate Change: Science and Society, University of Leeds, Teaching Assistant

STUDENT ADVISING

- 2016 Kaylee Glenney, B.Sc. Environmental Studies, UC Santa Cruz
- 2016 Samuel Pelham, B.Sc. Environmental Studies and Economics, UC Santa Cruz
- 2016 Sarah Faraola, B.Sc. Earth and Planetary Sciences, UC Santa Cruz
- 2016 Brolin Mirza, B.Sc., California State University, Stanislaus
- 2012 - 2014 Graduate Student Seminar, Mentoring of PhD and MS students, Cornell University

TEACHING DEVELOPMENT & CERTIFICATES

- 2013 Teaching in Higher Education (2 credit course, B+), Cornell University
- 2013-2014 5 Teaching Certificates, Center for Teaching Excellence, Cornell University
- 2012-2014 Faculty Seminars & Workshops, Center for Teaching Excellence, Cornell University

CONFERENCE PRESENTATIONS

- Lykkebo Petersen, K., **Heck, N.**, Paytan, A., and Potts, D.C. (2017) Desalination brine discharge impacts on coastal biology and water chemistry - a case study from Carlsbad Southern California. *AGU Fall Meeting*, 11-15 December, New Orleans, LA.
- Heck, N.**, Stedman, R., and Gaden, M. (2017) The goals for and challenges of incorporating HD information into fishery management. *8th World Recreational Fishing Congress*, July 16-20, Victoria, BC.
- Faraola, S., **Heck, N.**, Mirza Ordshahi, B., and Paytan, A. (2016) Coastal Residents Ocean Literacy about Seawater Desalination and its Impacts on Marine Ecosystems in the Monterey Bay. *AGU Fall Meeting*, 12-16 December, San Francisco, CA.
- Lykkebo Petersen, K., **Heck, N.**, Paytan, A., and Potts, D.C. (2016) Impacts of effluent from Carlsbad Desalination Plant on the coastal biology and chemistry in a *in-situ* study of pre- and post-discharge. *AGU Fall Meeting*, 12-16 December, San Francisco, CA.
- Heck, N.**, Paytan, A., and Potts, D. (2016) Coastal Residents' Perception of Seawater Desalination and Its Impacts on Coastal Ecosystems, *Association of American Geographers Annual Meeting*, 29 March - 02nd April 2016, San Francisco, CA.
- Heck, N.**, Paytan, A., and Potts, D. (2016) Coastal Residents' Perception of Seawater Desalination and Its Impacts on Coastal Ecosystems, *Ocean Sciences Meeting*, 21-26th February 2016, New Orleans, LA.
- Peterson, K., Paytan, A., Potts, D., and **Heck, N.** (2016) Impacts of effluent from Carlsbad Desalination Plant on the coastal biology and chemistry - a in-situ study of pre- and post-discharge, *Ocean Sciences Meeting*, 21-26th February 2016, New Orleans, LA.
- Johnson, K., Klain, S, **Heck, N.**, and Spalding, A. (2015) Towards Untangling Social-Ecological Choices: A Transdisciplinary Approach to Determine the Key Drivers of Fishing Effort in the US West Coast Groundfish Fishery, *145th American Society Fisheries Meeting*, August 16-20, Portland, OR.
- Stedman, R., **Heck, N.**, and Gaden, M. (2015) Human Dimensions of Great Lakes Fisheries: Managers' Information Needs, *58th Annual Conference on Great Lakes Research*, International Association for Great Lakes Research, May 25-29th, Burlington, VT.
- Heck, N.**, Paytan, A., Potts, D., and Haddad, B. (2015) Coastal SEES: Brine discharge from desalination plants, *NSF Coastal SEES PI Meeting*, January 29-30th, 2015 at NSF Headquarters in Arlington, VA.

- Heck, N.,** Stedman, R., and Gaden, M. (2013) Integration Human Dimensions into Great Lakes Fishery Management: Opportunities and Challenges, *25th International Congress for Conservation Biology*, July 21-25, Baltimore, MD.
- Heck, N.,** Stedman, R., and Gaden, M. (2013) Human Dimension information needs for Great Lakes Fishery Management, *19th International Symposium on Society and Resource Management*, June 4-8, Estes Park, CO.
- Heck, N.** (2010) Defining success: Stakeholders' opinion in two MPA sites on Canada's West coast, *24th International Congress for Conservation Biology*, July 3-7, Edmonton, AB.
- Heck, N.,** (2009) How to measure MPA success - a stakeholders' perspective in the Pacific Rim National Park Reserve, *Ocean Management Research Network National Conference*, October 21-24, Ottawa, ON.
- Dearden, P., **Heck, N.,** and Gray, D. (2009) Global Context for MPAs, *Marine Protected Areas in British Columbia meeting: Where are We Going and How Do We Get There?*, October 6-7, Duncan, BC.
- Heck, N.** (2009) Stakeholders' opinions on MPA performance and evaluation needs in the Pacific Rim National Park Reserve, *1st International Marine Conservation Congress*, May 19-24, Washington, DC.

CONFERENCE ACTIVITIES

- 2016 Conference Session Chair, Coastal and Marine Session, *Association of American Geographers Annual Meeting*, San Francisco, CA.
- 2016 Conference Session Co-chair, A holistic discussion on the impacts of seawater desalination on the marine environment: research, monitoring, Town Hall, *Ocean Sciences Meeting*, New Orleans, LA.
- 2016 Conference Session Co-chair, The Impact of Seawater Desalination on the Marine Environment, Poster Session, *Ocean Sciences Meeting*, New Orleans, LA.

SCIENCE OUTREACH

- 2014 Ocean science outreach, University of California, Santa Cruz
- 2013-2014 HDRU fishery management outreach, Cornell University

REVIEWER

- Journals Conservation Letters, Environmental Science and Policy, Marine Policy, Journal of Environmental Planning and Management, Ocean and Coastal Management, Environmental Monitoring and Assessment, Journal of Great Lakes Research, Coastal Management
- Books *Marine Environmental Impact of Seawater Desalination*, proposal, Elsevier, 2016
- Grants Great Lakes Fishery Commission, 2014

SOFTWARE SKILLS

ArcGIS, SPSS, R, Qualtrics, ENVI, SeaDAS, QGIS, Minitab, Expert Choice, Ucinet, Atlas.ti, Microsoft office

MEMBERSHIPS IN PROFESSIONAL ORGANIZATIONS

- Conservation GIS
- International Association of the Sciences of Limnology and Oceanography
- International Association for Society and Natural Resources
- American Association of Geographers
- Valuing Nature Network
- Society for Conservation Biology
- Ocean Management Research Network, Canada

AFFILIATIONS

- 2014- Institute of Marine Sciences, University of California, Santa Cruz
- 2011-2014 Human Dimensions Research Unit, Natural Resources, Cornell University
- 2010- Yorkshire Network for Canadian Studies
- 2008-2011 Water@Leeds Research Group, University of Leeds
- 2008-2011 Marine Protected Area Research Group, University of Victoria

REFERENCES

Adina Paytan, Professor, Institute of Marine Sciences, UC Santa Cruz, 831-459-1437, apaytan@ucsc.edu

Philip Dearden, Professor, Department of Geography, University of Victoria, BC, 250-721-7335, profdearden@gmail.com

Richard Stedman, Professor, Department of Natural Resources, Cornell University, Ithaca, NY 14850, 607-255-9729, rsc6@cornell.edu

Adrian McDonald, Professor, School of Geography, University of Leeds, UK, +44-113 34 3344, a.t.mcdonald@leeds.ac.uk